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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jens Foegler

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CHARLOTTE, NC 28211-2841

EXAMINER

JACOBSON, MICHELE LYNN

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1782

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DELIVERY MODE

10/13/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,976	Applicant(s) FOEGLER ET AL.	
	Examiner MICHELE JACOBSON	Art Unit 1782	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4 and 6-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/10/10 has been entered.

Examiner Notes

2. Any objections and/or rejections made in the previous action, and not repeated below, are hereby withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 25 recites the limitation “the coating film former consists of gelatin or collagen”. There is insufficient antecedent basis for the limitation “film former” in the claim. The coating is disclosed to be “based on protein” but is not disclosed to comprise a “film former”. The entire coating forms a film, and therefore it is unclear what this limitation is meant to refer to. Since gelatin and collagen are protein materials, the coating claimed in claim 25 will be interpreted comprise gelatin or collagen for the purpose of examination. Appropriate correction is required.

Claim Objections

6. Claims 1, 25 and 27 are objected to because of the following informalities: Claims 1, 25 and 27 contain recitations of “weight” in units of g/m^2 , which is a unit of weight per unit area and is therefore actually a recitation of *density*. The examiner

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suggests that applicant either recite weight per unit area or density instead of weight.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 4, 6-8, 10-17 and 19-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siebrecht et al. U.S. Patent No. 5,043,194 (hereafter referred to as Siebrecht) in view of Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer).

9. Siebrecht teaches a sausage casing comprising a textile layer coated with cellulose that imparts a decorative, sturdy appearance to the known tubular packaging casings based on cellulose. (Col. 1, lines 55-60, Col. 2, lines 40-45) The textile reinforcing layer can comprise cellulose fibers as well as polyamide and polyester fibers. (Col. 3, lines 54-57) The weight per unit area of the reinforcing layer is recited to be in the range of 10 to 400 g/m². (Col. 4, lines 17-21) The thickness of the outer cellulose layer is recited to be below 100 µm and in particular below 50 µm so that the

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texture of the textile reinforcement may be observed. (Col. 2, lines 56-63) The weight per unit area of the composite comprising the textile layer and the coating is about 30 to 200 g/m². (Col. 3, lines 46-48) The casing of Siebrecht can be shirred for use on typical stuffing apparatus. (Col. 5, lines 28-32) The casing of Siebrecht may also further comprise a barrier layer which presents penetration of atmospheric oxygen. (Col. 5, lines 27-28)

10. The casing of Siebrecht is produced by overlapping the edges of a textile sheet shaped structure and adhering them to one another to form a tubular structure which is then impregnated with coating agent. (Col. 4, lines 39-51) This process is disclosed to produce a seamless casing. (Col. 4, lines 25-27)

11. Siebrecht is silent regarding utilizing a protein coating.

12. Hammer teaches a shaped body in the form of a flat or tubular film based on plastifiable biopolymers or cleavage products or derivatives thereof and/or synthetic polymers of natural monomers useful as a sausage casing. (Col. 1, lines 42-55)

Preferred examples of the plastifiable biopolymers include extrudable gelatins and other natural proteins, alginic acids and alginates and carrageenan. (Col. 2, lines 38-46) The content of the biopolymers is generally from 10% to 90% by weight based on the total weight of the shaped body. (Col. 2, lines 54-58) Preferably, two or more of the starting biopolymers are used together. (Col. 2, lines 59-60) They are expediently uniformly mixed and plastified at relatively high temperatures by relatively long kneading in a twin-screw extruder in the presence of a plasticizer, a plasticizing aid (=lubricant), a hardener

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(=crosslinker) and, if appropriate, a filler. (Col. 2, lines 60-64) The composition is also recited to include pigments. (Claim 13)

13. Hardeners or crosslinkers which can be used include caramel (caramelized sugar, maillose) and dialdehydes (especially glyoxal and glutardialdehyde). (Col. 3, lines 14-17) The content of crosslinkers is generally from 0.2 to 30% by weight. (Col. 3, line 27)

14. The tubes are recited to be extruded and can be treated internally and externally to modify their properties. Generally, the tubes are gathered in sections and the resultant shirred sticks are processed on conventional machines. The seamless tubular films are particularly suitable as sausage casings, in particular for small sausages. In addition, the shaped bodies of the invention are also suitable for packaging other foods, e.g. cheese. (Col. 4, lines 33-47) The composition of the invention may also be utilized in a multilayer film including three layers wherein a fibrous polymer pulp is extruded into two fiber-free layers. (Col. 3, lines 55-57)

15. In another embodiment, a thermoplastic sheet was produced from the inventive composition which was used to wrap meat products such as cooked ham. The sheet was also recited to be covered with a net for cooking the ham which presumably provided additional reinforcement. (Col. 5, lines 30-35) The film was recited to be oxygen and smoke permeable while having low liquid and fat permeability. (Col. 5, lines 33-35)

16. Hammer further discloses that the process used to produce the inventive casing is simple, inexpensive and environmentally friendly since the casings are produced from

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natural raw materials. (Col. 1, lines 39-41) The films of the invention generally have a thickness from 20 to 120 μm . (Col. 2, lines 24-30)

17. Both Siebrecht and Hammer are directed to sausage casings. One of ordinary skill in the art would have been motivated to substitute the inventive film of Hammer for the cellulose coating disclosed by Siebrecht by laminating the film of Hammer to the reinforcement disclosed by Siebrecht in order to produce a more environmentally friendly product that would not require the harsh chemicals required for the viscose process disclosed by Siebrecht.

18. Since the film of Hammer is disclosed to be produced within the thickness range disclosed to be necessary for the invention of Siebrecht the textural features of the reinforcement layer would still be visible through the film of Hammer. "When a patent claims a structure already known in the prior art that is altered by mere substitution of one element for another known in the field, the combination must do more than yield a predictable result." *KSR*, 127 S. Ct. at 1740. The obvious substitution of the material of Hammer which was known to be suitable for sausage casings for the coating of Siebrecht would have yielded the predictable result of producing a reinforced sausage casing.

19. Regarding claims 1, 6, 13-15, 25 and 28: Hammer discloses the same coating material as claimed in claims 1, 6, 13-15 and 25. The reinforcement layer of Siebrecht is comprised of the same materials and has the same weight per unit area as claimed in claims 1, 4, 25 and 28.

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20. Regarding claim 3: The material disclosed by Hammer extruded onto a reinforcing layer as disclosed in Siebrecht is interpreted to read on the limitation that the coating permeates the reinforcement as claimed in claim 3 since the extruded coating material would have been absorbed into the fiber based reinforcement of Siebrecht.

21. Regarding claims 7 and 26: Hammer recites that the protein is present in an amount of from 10% to 90% by weight based on the total weight of the composition. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)

22. Regarding claims 8 and 10-12: Hammer recites that the composition preferably comprises two or more plastifiable biopolymers. Alginate and carrageenan (a branched polysaccharide) are recited to be useful plastifiable biopolymers along with gelatin. While Hammer does not specifically disclose that alginate and carrageenan act as plasticizers, they are the same compounds claimed by applicant as plasticizers and therefore would be expected to perform the same function. Therefore, the composition recited by Hammer is the same as the claimed in claims 8, 10 and 11. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the ratio of gelatin to alginate or carrageenan. Hammer teaches that previously it had not been possible to give alginate based sausage casings the stability necessary. Owing to the action of the sausage emulsion and brine the poorly soluble calcium salt is gradually converted into the readily soluble sodium salt of alginic acid. Alginate casings as a result lose their strength. (Col. 1, lines 29-34) In light

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of this teaching, one of ordinary skill would not have sought to employ alginate as the majority plastifiable biopolymer and would have utilized it in amounts that were less than 50%. The obvious use of alginate in amounts less than 50% would have produced the invention claimed in claim 12.

23. Regarding claim 16: Hammer specifically recites that pigments may be used as claimed in claim 15. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the amount of pigment or dye used depending on the intensity of the resulting color desired. Such an optimization of the amount of pigments would have produced the invention as claimed in claim 16.

24. Regarding claim 17: The examiner takes official notice multilayer sausage casings are universally known in the sausage casings arts comprising layers that do not comprise proteins. Furthermore, Siebrecht specifically teaches the inclusion of a further oxygen barrier layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have disposed an additional non-protein barrier layer or protective layer to the casing of Siebrecht. It is noted by the examiner that the official notice taken by the examiner in the office action dated 5/11/10 that multilayer sausage casings are universally known in the sausage casings arts comprising layers that do not comprise proteins is taken to be admitted prior art because applicant failed to traverse the examiner's assertion of official notice. See MPEP 2144.03

25. Regarding claims 19-22: While the composition disclosed by Hammer is recited to be extruded, one of ordinary skill would have recognized that it could also be utilized as a coating composition for a casing as disclosed by Siebrecht. Siebrecht discloses

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that impregnation of the textile reinforcement which has been formed into a tube yields a seamless casing. The examiner takes official notice that it is well known in the sausage casing art that tubular casings may also be formed with a seam by forming a coated sheet into a tubular shape. Instead of extruding the inventive composition of Hammer as a tube, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have applied it as a coating to a sheet of reinforcing material. The coating could then be said to impregnate the fabric material and would permeate the fabric material. This would have been the same as the invention claimed in claim 19. The obvious formation of this impregnated sheet into a tubular casing would have produced a casing with one longitudinal seam which is the same as the invention claimed in claim 20. Such a tube would have been produced by the same method as that claimed in claim 22.

26. Additionally, the examiner takes official notice that it is well known in the sausage casing art to support preformed tubular casings with air so that they may be internally or externally coated. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have supported a preformed reinforcing fabric tubular article with air while coating it with the composition recited by Hammer. The obvious utilization of this method step would have produced a method the same as that claimed claim 21. It is noted by the examiner that the official notice taken by the examiner in the office action dated 5/11/10 that it is well known in the sausage casing art to support preformed tubular casings with air so that they may be internally or

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externally coated is taken to be admitted prior art because applicant failed to traverse the examiner's assertion of official notice. See MPEP 2144.03

27. Regarding claims 23 and 24: The casing of Siebrecht is for sausage as claimed in claim 23 and may be shirred as claimed in claim 24.

28. Regarding claim 27: Siebrecht discloses that the weight per unit area of the composite comprising the textile layer and the coating is about 30 to 200 g/m². It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the result effective variable of the thickness of the coating in order to produce a casing with a weight per unit area in the range disclosed to be useful by Siebrecht. This range overlaps and is substantially the same as that claimed in claim 27. The casing produced by the modification of Siebrecht with Hammer would have a water vapor permeability within the range claimed by applicant since it is made from the same materials disclosed to be useful by applicant. Furthermore, it is well known in the sausage casing art to provide porosity or barrier layers depending on the amount of permeability desired for a sausage casing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized these properties by providing porosity or a barrier layer to the casing produced by the modification of Siebrecht with Hammer depending on the amount of vapor permeability desired. Such an obvious modification would have produced the same water vapor permeability as claimed in claim 27.

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29. Regarding claim 29: The textile layer of Siebrecht is interpreted to be "self-supporting" as claimed in claim 29 since it able to provide support to the casing disclosed.

30. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siebrecht et al. U.S. Patent No. 5,043,194 (hereafter referred to as Siebrecht) and Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer) as applied to claim 1 above in further view of Gord et al. U.S. Patent Application Publication No. 2002/0064580 (hereafter referred to as Gord).

31. Siebrecht and Hammer teach what has been recited above but are silent regarding the addition of polyvinyl acetate or polyacrylate.

32. Gord teaches a cellulose fiber based sausage casing coated with a solution comprising a protein such as gelatin and other additives. (Para. 18, 19) Polyvinyl acetate and polyacrylate are recited to be useful additives for the protein solution because they impart higher smoke permeability to the casing. (Para. 21)

33. Siebrecht, Hammer and Gord are all directed towards sausage casings. One of ordinary skill would have been motivated to utilize polyvinyl acetate or polyacrylate as an additional additive in the coating necessary for the invention of Siebrecht in order to impart higher smoke permeability to the casing. The obvious modification of the invention of Siebrecht by utilizing the material of Hammer for the coating and polyvinyl

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acetate or polyacrylate as an additive in the coating in order to increase the smoke permeability of the casing would have produced the invention claimed in claim 9.

34. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siebrecht et al. U.S. Patent No. 5,043,194 (hereafter referred to as Siebrecht) and Hammer et al. WO98/34490 (U.S. Patent No. 6,902,783 used herein for translation and reference, hereafter referred to as Hammer) as applied to claim 1 above in further view of Jon et al. U.S. Patent No. 5,955,126 (hereafter referred to as Jon).

35. Siebrecht and Hammer teach what has been recited above but is silent regarding the addition of a polyvinylidene chloride copolymer layer.

36. Jon teaches a polyvinylidene chloride copolymer coated fiber reinforced cellulose casing coated with a solution comprising a protein. (Claims 1 and 6)

37. Siebrecht, Hammer and Jon are all directed towards sausage casings. As stated above, it is universally known in the sausage casing arts to utilize multilayer casings.

Jon evidences that polyvinylidene chloride layers were known to be useful in combination with coated reinforced casings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized a polyvinylidene chloride layer as an additional layer in the casing recited by Siebrecht, especially since Siebrecht discloses the use of additional layers. The utilization of such a layer in the casing of Siebrecht as additionally modified by Hammer would have produced the casing as claimed in claim 18.

Response to Arguments

38. Applicant's arguments with respect to claims 1, 3, 4 and 6-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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